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## Suicide risk among gender and sexual minority college students: The roles of victimization, discrimination, connectedness, and identity affirmation

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### Abstract

**Background**—Little is known about how victimization and discrimination relate to suicide risk among sexual and gender minority (SGM) college students, or what is protective for these students. The current study will: 1.) determine the extent to which interpersonal victimization, discrimination, identity affirmation, and social connectedness are associated with suicide risk characteristics, and if race and/or ethnicity moderates this association; 2.) examine whether identity affirmation and social connectedness are protective against associations between victimization or discrimination and suicide risk characteristics.

**Method**—Participants were 868 students (63.6% female) from four United States universities who completed an online screening survey and met the following study inclusion criteria: self-identification as gender and/or sexual minority, endorsement of at least one suicide risk characteristic and no current use of mental health services. Participants also completed measures

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that assessed demographics, non-suicidal self-injury (NSSI), victimization, discrimination, connectedness, and LGBTQ identity affirmation.

**Results**—Victimization was positively associated with depression severity, suicidal ideation, alcohol misuse, suicide attempt history, and NSSI. Discrimination was positively associated with depression severity, suicide attempt history, and NSSI. Connectedness was inversely associated with depression severity, suicidal ideation severity, suicide attempt history, and NSSI, and moderated the association between victimization and suicide attempt history. LGBTQ identity affirmation moderated the link between victimization and depression.

**Conclusions**—Results suggest efforts to decrease victimization and discrimination and increase connectedness may decrease depressive morbidity and risks for self-harm among SGM college students. Further, increasing LGBTQ identity affirmation may buffer the impact of victimization on depression.

### Keywords

sexual and gender minority; college students; suicide risk; victimization; discrimination

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## 1. Introduction

The prevalence of suicide has been steadily increasing in the United States (Centers for Disease Control and Prevention, 2019), and suicide is the second leading cause of death among college students (Centers for Disease Control and Prevention, 2019). Sexual minority (i.e., same-sex attracted or identifying as lesbian, gay, or bisexual) and gender minority (i.e., those who do not identify with their sex assigned at birth, or identifying as transgender or gender non-binary; SGM) SGM persons have a higher prevalence of suicide and suicide behavioral across the life span (Hatzenbuehler et al., 2013). Lifetime history of suicide attempts are approximately 4% in the general population, 11% among sexual minorities, and 40% among gender minorities (Hottes et al., 2016; Marshall et al., 2016; Nock et al., 2008).

For many SGM college students, attending college is an experience that includes increased awareness of, and encounters with, interpersonal victimization and discrimination (Blosnich and Bossarte, 2012; Kelleher, 2009). Several studies have documented negative psychological outcomes (Blosnich and Bossarte, 2012; Testa et al., 2017; Woodford et al., 2014a), physiological effects (Bränström et al., 2016), and maladaptive coping behaviors (Blosnich and Bossarte, 2012) among individuals who have experienced victimization and discrimination. The negative consequences of victimization and experiences of discrimination, coupled with disparities in suicide risk among individuals who identify as belonging to sexual and gender minority groups, calls for increased investigation of possible protective factors. Minority stress theory posits that stress related to marginalized social identities is linked to psychological distress (Meyer, 2003), and that coping and social support buffer the effect of these stressors. Within the limited existing research (Craig and Smith, 2011), investigators have reported that greater family connectedness, adult caring, and school safety/connectedness are associated with reduced risk of suicidal ideation and behavior among sexual minority youth (Eisenberg and Resnick, 2006; Hatchel et al., 2019). Prior research also points to social support as a protective mechanism that mitigates against

suicidal behavior among youth and emerging adults (Eisenberg and Resnick, 2006; Whitlock et al., 2014; Wilson et al., 2016). Further, a social support-related intervention has been associated with lower mortality among adolescents at elevated suicide risk (King et al., 2019).

Positive identity affirmation, defined as developing positive feelings, self-acceptance, and a sense of belonging to one's identity group, has been found to mediate the link between experiences of discrimination and psychological distress (Woodford et al., 2014b). Prior research indicates that clinical interventions specific to positive identity affirmation helped mitigate maladaptive outcomes for students (Craig and Austin, 2016; Walton and Cohen, 2011). For example, a brief, eight module affirmative cognitive behavioral coping skills group intervention with SGM youth found reductions for depressive symptoms and appraising stress as a threat (Craig and Austin, 2016). Yet, limited research has examined if connectedness and identity affirmation serve as protective mechanisms that mitigate against suicide risk characteristics among SGM college students.

Students who self-identify as a SGM and as a member of a racial/ethnic minority group may be more adversely affected by compounded discrimination and social exclusion, including possible racial and ethnic discrimination from the SGM community, and possible homophobia and heterosexism within their racial/ethnic community (Harper and Wilson, 2016; Wilson and Harper, 2013). These experiences highlight the importance of intersectionality, the simultaneous consideration of the meaning and consequences of multiple categories of identity (Else-Quest and Hyde, 2016). Belonging to multiple marginalized groups may increase risk not only for suicide (Shadick et al., 2015; Toomey et al., 2017) but also for exposure to experiences of victimization and discrimination (Calabrese et al., 2015; Ghabrial, 2017).

## 1.1 Present Study

Research is urgently needed to understand the association of victimization and discrimination with suicide risk characteristics among self-identified SGM college students, and to examine whether social connectedness and identity affirmation are protective factors for these students. Further, sexual and gender minority identification, and its intersection with racial and ethnic minority identification, may be important for the identification of potential protective factors among these college students. Thus, the current study has two primary aims:

1. Determine the extent to which interpersonal victimization, discrimination, identity affirmation, and social connectedness are associated with the presence and severity of suicide risk characteristics (i.e., depression, heavy alcohol use, suicidal ideation, suicide attempt history, non-suicidal self-injury) in college students who self-identify as SGM, and determine whether any identified associations are moderated by racial and ethnic minority status.

Hypotheses: Consistent with Minority Stress Theory, it is expected that: 1.) higher victimization and discrimination will be associated with higher levels of suicide risk characteristics, 2.) higher identity affirmation and social connectedness will be associated with lower levels of suicide risk characteristics,

and 3.) the identified associations will be stronger among students who identify as both a SGM and a racial and ethnic minority.

2. Determine whether identity affirmation and social connectedness moderate any identified associations between victimization or discrimination and suicide risk characteristics among SGM college students.

Hypothesis: Given prior research documenting the protective effects of social support for SGM youth, it is expected that: LGBTQ Identity affirmation and social connectedness will protect against suicide risk characteristics among SGM college students who have experienced interpersonal victimization and discrimination.

## 2. Methods

### 2.1 Participants

Participants were 868 college students who self-identified as a sexual and/or gender minority, endorsed at least one risk factor for suicide (i.e., current depression, current heavy alcohol use, past-year suicidal ideation, lifetime history of suicide attempt), and were not currently receiving mental health services (MHS). 90% of the sample identified as a cisgender man or woman (defined as a person whose sense of personal identity and gender corresponds with their sex assigned at birth), and 10% identified as transgender or genderqueer. Participants were enrolled in undergraduate (75.0%), graduate (21.1%), or professional (3.9%) studies with the following age distribution: 18–22, 76.8%; 23–25, 12.3%; 26, 10.9%. Four universities were included in the current study. Three universities are classified as public research universities, and one university is classified as a private research university. Participants were recruited by email to participate in the eBridge study ([ClinicalTrials.gov](https://clinicaltrials.gov) []) during the fall semesters of 2017 and 2018. The eBridge study is examining the effectiveness of an online screening and brief counseling intervention aimed at facilitating treatment linkage for college students at elevated risk for suicide. Study eligibility required participants to be 18 years or older, currently enrolled in the university, and living on or near the university community (e.g., not studying abroad), to have no prior participation in this study, and to not be graduating at the end of the current semester. Of the 86,387 invited students, 19,643 consented (22.7%) to participate. A total of 4,262 met the eligibility criteria, and our analytic sample focuses on the 868 students within this study sample (20.3%) who self-identified as a sexual and/or a gender minority. Slightly over half of the sample (51.3%) endorsed 2 or more suicide risk factors; the remaining students (48.7%) endorsed one suicide risk factor.

### 2.2 Measures

**2.2.1. Screening measures**—The suicide risk screening survey was comprised of four measures assessing depression, suicidal ideation, history of suicide attempt, and harmful drinking. Suicide risk was defined as a positive screen on one or more of these.

The *Patient Health Questionnaire-2 (PHQ-2)* is a 2-item self-report scale (Kroenke et al., 2003). The PHQ-2 asks respondents to indicate the frequency of depressed mood and

anhedonia over the past two weeks on a 4-point Likert scale ranging from “not at all” to “nearly every day” (range of 0–3). This scale has a cut-off score of 3 for detection of a depressive disorder (Kroenke et al., 2003), and was used to indicate a positive screen for depression in our study. In addition, the psychometric properties of the PHQ-2 are comparable to longer depression scales and demonstrated good sensitivity and specificity relative to a diagnostic interview (Richardson et al., 2010).

Items from the *National Comorbidity Survey (NCS)* were used to assess suicidal ideation and lifetime history of a past suicide attempt. Suicidal ideation was assessed with two items. If students responded “yes” to either item, “In the past 12 months, has there ever been a period of 2 weeks of more when you felt like you wanted to die?” or “In the past 12 months, have you ever felt so low you thought about committing suicide?” this was considered a positive screen for suicidal ideation. Further, students could screen positive for suicidal ideation with a non-zero response to an item from the *Patient Health Questionnaire-9* (Kroenke et al., 2001), which states “In the past two weeks, how often have you been bothered by thoughts that you’d be better off dead or of hurting yourself in some way?” Suicide attempt history was indicated by a positive response to the NCS question, “In your lifetime, have you ever attempted suicide?”

The *Alcohol Use Disorders Identification Test (AUDIT)* is a 10-item scale that asks about frequency of any drinking, average amount per day, and frequency of binge drinking (6 or more drinks on one occasion) (Saunders et al., 1993). It is scored on a 0–40 scale. A recent examination of the validity of the AUDIT in college students indicated a screen cutoff score of 6 to 8 was particularly effective in detecting high-risk alcohol use in the past 28 days (Kokotailo et al., 2004). A cut-off score of 8 was used in the current study.

### 2.2.2. Additional baseline and outcome measures

**Demographic characteristics:** College student demographics included self-identified race, ethnicity, academic status, age, sexual orientation, gender identity, and sex assigned at birth.

**Depression:** Depression was assessed using the *Patient Health Questionnaire-9* (Kroenke et al., 2001). The PHQ-9 assesses for depressive symptoms over the past two weeks on a 4-point Likert scale ranging from “never” to “nearly every day” (range of 0–27). The full scale was utilized as the dependent variable for regressions predicting depression symptoms.

**Non-suicidal self-injury:** Non-suicidal self-injury (NSSI) was assessed using a single item from the *Youth Risk Behavior Survey* (Centers for Disease Control and Prevention, 2016), “In the past 12 months, have you ever harmed or hurt your body on purpose, such as cutting or burning your skin, or hitting yourself, without wanting to die?” and followed up with an assessment of frequency. Any endorsement of NSSI in the past year was coded as “Yes” or “No” for analyses.

**Experiences of discrimination:** The revised *Everyday Discrimination Scale (EDS)* was used to assess the frequency of experiences of discrimination in “day-to-day life” (Sternthal et al., 2011; Williams et al., 1997). This general scale of discrimination uses a 6-point scale ranging from 0–5 (0= Never; 1= Less than once a year; 2 = A few times a year; 3 = A few

times a month; 4 = At least once a week; 5 = Almost every day). Example items include, “people act as if they are afraid of you” and “you are threatened or harassed”. Higher scores indicate greater frequency of experiences of discrimination. The full-version of the EDS was associated cross-sectionally with four different indicators of health status and accounted for a large proportion of the differences in health between Blacks and Whites, beyond the effect of socioeconomic status (Williams et al., 1997).

**Interpersonal victimization:** A revised version of the 10-item *Interpersonal Victimization Scale* (D’Augelli et al., 2006), was administered to assess the frequency with which students experienced verbal and physical threats or assault in the past 6 months. This scale was modified to not be specific to perceived reason for victimization. This scale uses a 4-point scale ranging from 0–3 (0 = Never; 1 = Once; 2 = Twice; 3 = Three or more). Example items include, “chased or followed” and “threatened with a weapon. “Higher scores indicate greater frequency of experiences with interpersonal victimization in the past 6 months.

**Social connectedness:** A 3-item *UCLA Loneliness Scale* questionnaire was used to assess students’ connectedness. This scale was developed from the Revised UCLA Loneliness Scale (Hughes et al., 2004). Each question is rated on a 3-point scale (1 = Hardly Ever; 2 = Some of the Time; 3 = Often) and all items are summed to give a total score. Example item includes, “I lack companionship”. Scores were reverse-coded for ease of interpretation, with higher scores indicating greater connectedness.

**LGBTQ identity affirmation:** The current study used a modified version of the 3-item identity affirmation subscale from the larger 12-item *LGB Identity Scale* (Mohr and Kendra, 2011), which measures the extent to which students feel affirmed in their LGBTQ identity. It uses a 6-point scale ranging from 0–5 (0= Disagree strongly; 1= Disagree; 2 = Disagree somewhat; 3 = Agree somewhat; 4 = Agree; 5 = Strongly agree). Example item includes, “I am proud to be LGBTQ.” High scores indicated greater affirmation.

### 2.3 Procedure

Students were invited by email (obtained from each university registrar’s database) to participate in the eBridge study. All invited participants at each campus were enrolled in a drawing for ten \$100 amazon gift cards. This study was approved by each participating site’s institutional review board. The investigation was carried out in accordance with the latest version of the Declaration of Helsinki. Informed consent of the participants was obtained after the nature of the procedures had been fully explained. Participants completed online self-report measures of demographics, history of suicide attempt, suicidal ideation, depression, and alcohol use. The present study relies on data collected as part of the baseline procedure for the larger intervention trial.

### 2.4 Description of data analyses

Data were analyzed with SPSS version 24. Multiple one-way analysis of variance (ANOVA) tests were used to examine differences between demographic characteristics (e.g., gender, race/ethnicity, sexual orientation) and continuous interpersonal and suicide risk variables, and chi-square analyses were used for dichotomous suicide risk variables. Post-hoc Tukey

tests were used for pairwise comparisons in the ANOVAs, and post-hoc testing for chi-square analyses examined the unique contribution (i.e., standardized residual) of each cell (Beasley and Schumacker, 1995). Bivariate correlations were computed for comparisons between clinical and interpersonal variables. Linear regression models were used to examine depression and alcohol use and binary logistic regressions examined presence of suicidal ideation, suicide attempt history, and NSSI. All variables were centered and multicollinearity assumptions were met for all models (variance inflation factor < 2.0 for all covariates). Hosmer and Lemeshow tests indicated that logistic regression models fit the data well. To address aim #1, all models controlled for age, gender, race/ethnicity, study-site, and sexual orientation and contained the main effects for victimization, discrimination, connectedness, and LGBTQ affirmation. Interaction terms for the four main effect variables with racial/ethnic minority status were initially included, but none of these interactions were significant and were thus not included in final models. To address aim #2, models with a significant main effect for either victimization or discrimination added interaction terms for victimization and/or discrimination by connectedness and by LGBTQ identity affirmation in step 2 of the regression models. These interaction terms were removed for non-significance one by one utilizing a backward stepwise procedure, with only significant interactions remaining in the final models.

### 3. Results

Table 1 presents the demographic distribution of gender, race/ethnicity, and sexual orientation, and the means and standard deviations of victimization, discrimination, connectedness, and LGBTQ identity affirmation.

#### 3.1. SGM Status and differences in victimization, discrimination, connectedness, identity affirmation

Relative to cisgender sexual minority women and transgender/genderqueer students, cisgender sexual minority men reported significantly lower levels of discrimination and identity affirmation. Cisgender sexual minority men also reported lower levels of victimization relative to cisgender sexual minority women. Sexual and gender minority students identifying as Black reported significantly higher levels of discrimination relative to other racial groups. Students identifying as gay/lesbian reported significantly less discrimination relative to bisexual and queer/unlabeled students, and significantly greater connectedness than queer/unlabeled students. Pansexual students reported greater LGBTQ identity affirmation relative to other sexual orientation groups.

#### 3.2. SGM status and differences in suicide risk

Differences in suicide risk by gender, race/ethnicity, and sexual orientation are presented in Table 2. Cisgender sexual minority men had higher levels of alcohol misuse, but had lower depression severity and were less likely to engage in NSSI relative to cisgender sexual minority women and transgender/genderqueer students. Cisgender sexual minority women were more likely than cisgender sexual minority men to report past year suicidal ideation, though there were no significant differences between gender groups on suicide attempts. With regard to racial differences, White students reported higher levels of alcohol use

relative to Asian students, and White students were significantly less likely to report a history of suicide attempt relative to Black and Hispanic students. Gay/Lesbian students reported lower levels of depression relative to bisexual and pansexual students and had significantly lower rates of past-year suicidal ideation and NSSI. Pansexual students had less alcohol misuse than gay/lesbian and bisexual students, but had significantly higher rates of NSSI.

#### **Correlations between interpersonal variables and suicide risk characteristic—**

Correlations between interpersonal variables and suicide risk characteristics are presented in Table 3. Victimization was significantly associated with all five suicide risk characteristics, whereas discrimination had significant bivariate associations with current depression, suicide attempt history, and past year NSSI but not with current alcohol use and past year suicidal ideation.

#### **Linear regressions examining depression and alcohol use—**

Linear regressions examining depression and alcohol use are presented in Table 4. There were no statistically significant interactions for racial/ethnic minority status and main effect variables. Discrimination ( $\beta = .123$ ), victimization ( $\beta = .069$ ), and connectedness ( $\beta = -.420$ ) had significant main effects for depression. Further, there was a significant interaction between victimization and LGBTQ affirmation ( $\beta = -.064$ ), whereby the effects of victimization on depression were more pronounced for those with low levels of LGBTQ identity affirmation. In the linear regression model examining alcohol misuse, victimization ( $\beta = .141$ ) and connectedness ( $\beta = .100$ ) had significant main effects for greater levels of alcohol use.

#### **Logistic regressions examining suicidal ideation, suicide attempts, and NSSI**

—Logistic regression models examining suicidal ideation, suicide attempts, and NSSI are presented in Table 5. There were no statistically significant interactions for racial/ethnic minority status and main effect variables. Connectedness had a significant main effect associated with lower odds [Adjusted Odds Ratio (AOR) (95%) = 0.81 (0.75, 0.89)] of past-year suicidal ideation. In the logistic regression examining lifetime suicide attempt, each point on the victimization scale was associated with a 11% increase in odds of a lifetime suicide attempt [AOR (95%) = 1.11 (1.05, 1.18)], and connectedness had a significant main effect for lower odds of a lifetime attempt ([AOR (95%) = 0.87 (0.79, 0.96)]. Further, there was a significant interaction between victimization and connectedness, whereby victimization and connectedness were negatively correlated among those without a suicide attempt history, but positively correlated among those with a past attempt. In the logistic regression examining past year NSSI, each point on the victimization scale was associated with a 6% increase in odds of a lifetime suicide attempt [AOR (95%) = 1.06 (1.01, 1.13)], and connectedness had a significant main effect for lower odds of past year NSSI ([AOR (95%) = 0.83 (0.76, 0.91)].

## **4. Discussion**

In this survey study of self-identified SGM college students at four universities in the United States, the majority of students (55.6%) endorsed experiences of interpersonal victimization and of discrimination. This disheartening finding underscores how self-identified SGM



college students commonly undergo victimization and discrimination and demonstrates the critical need for robust efforts on college campuses to help decrease such experiences and to further understand the link with sexual orientation and gender identity. Student reports of victimization and discrimination were associated with depression, suicide attempt history, and non-suicidal self-injury. Specifically, higher levels of victimization and discrimination were associated with high levels of depression, heavy alcohol use, suicide attempt history, and NSSI. Such findings emphasize how experiences of victimization and discrimination are linked with a range of suicide risk characteristics, suggesting an urgent need to decrease experiences of victimization and discrimination among self-identified SGM college students.

Although prior studies highlight the importance of identity and social support in managing identity-related stress (Puckett et al., 2015), to our knowledge this study is the first empirical examination of connectedness as a moderator of the associations of victimization and discrimination with suicide risk among SGM college students. Contrary to expectation, the association of interpersonal victimization and discrimination on suicide risk outcomes were not meaningfully mitigated by students' self-reported connectedness. The significant inverse associations demonstrated between connectedness and depression, suicidal ideation, suicide attempts, and NSSI suggest that social connectedness serves as an important protective factor for students, regardless of degree of victimization or discrimination. This finding is consistent with previous research that indicates the importance of connectedness among adolescent (Opperman et al., 2015) and college student samples (Drum et al., 2017) related to suicide risk characteristics. This study extends previous research given the specific focus on identity affirmation as a type of connectedness, specifically among SGM students.

Positive identity affirmation was found to moderate the link between experiences of interpersonal victimization and one of the suicide risk factors, depression. This protective effect of positive identity affirmation is consistent with prior literature demonstrating that self-affirmation and ethnic identity affirmation are protective against a range of environmental stressors for individuals who identify with a minority group (Craig and Austin, 2016; Walton and Cohen, 2011). The presence of positive identity affirmation may be beneficial to self-identified SGM students who have experienced recent experiences of interpersonal victimization by providing an internal sense of connectedness and pride in their identity. This may increase their perceptions of safety and support amongst other individuals who also identify as a SGM. We speculate, along with others (Duggins et al., 2016), that this sense of connectedness to their LGBTQ identity could prevent youth from internalizing experiences with interpersonal victimization, thereby increasing their mood, self-worth, and feelings of safety and support. For example, students who have pride in their identity may be more likely to engage in discussions about the context where they have experienced emotional support as well as victimization and from whom, thereby increasing awareness and possibly providing students with messages about coping strategies for identity-related stressors.

Limited research has explored potential race and ethnic differences among self-identified SGM individuals regarding experiences of victimization, discrimination, and suicide risk characteristics (Wade and Harper, 2017; Wilson and Harper, 2013). While our analyses did not find racial or ethnic minority status to moderate the effects of victimization or

discrimination on suicide risk characteristics, our results suggested that Black students report significantly more experiences of discrimination compared to their peers of any other racial and ethnic group. This observation is important to note because despite shared identification as sexual and gender minority college students, Black students within this population are subjected to greater negative experiences. Further research is needed and tailored approaches to prevention/intervention may be helpful and indicated for Black SGM students on college campuses.

#### 4.1 Strengths and limitations

The findings of this novel study must be interpreted within the context of its strength and weaknesses. A key strength of the current study is its focus on a significant gap in the existing literature specific to examining victimization and discrimination among SGM students. The examination of the role of racial/ethnic intersectionality is a particular study strength, as is the inclusion of a diverse sample of college students who identify as SGM across four universities in the United States.

In terms of limitations, the study utilizes a self-report survey method, and its cross-sectional design limits any causal inferences in interpreting our results. In addition, there were too few American Indian/Alaskan Native college students to examine this subgroup of students independently, despite past research indicating elevated suicide rates in this group compared to other ethnic groups in the United States (Alcántara and Gone, 2008). Additionally, while the four participating universities were located in different parts of the U.S., they were not nationally representative. The current study's generalizability is limited since we only examined SGM college students with at least one suicidal risk factor, to the neglect of SGM college students with no indicators of suicidal risk. The current study also did not assess the significance of anxiety, psychosis, personality disorders, and other substance misuse beyond alcohol for suicide risk, and may be important for future research to include these factors. An additional study limitation may be in the differences in time period assessed for victimization (past 6 months) and discrimination (lifetime), which may partly explain differences in strength of associations with suicide characteristics, particularly those also sharing a more recent assessment timeline (e.g., depression, suicidal ideation, heavy alcohol use). Finally, we acknowledge that attitudes and experiences can change over time, which means it is especially important to assess these issues using recent data from a large, high-risk sample of college students, a strength of this study. However, we also acknowledge a limitation of the current study is the limited examination of more strength-based approaches (e.g., feelings of empowerment). It is important for future research to examine SGM college students not only from a victimization perspective, but also by incorporating a more strength-based perspective.

## 5. Conclusions

Suicide among young people is a major cause of premature mortality and public health concern on our nation's college campuses. College students who identify as belonging to gender and sexual minority groups all too frequently experience victimization and discrimination and are at increased risk for suicide. Findings of this novel study suggest

efforts to decrease victimization and discrimination are needed, especially in light of clear links with suicide risk characteristics and NSSI. The current study highlights the importance of LGBTQ identity affirmation as protective against depression for students who reported victimization, and the significant salutary role of connectedness. Clinical interventions and school resources that emphasize identity affirmation and connectedness may be particularly beneficial for this subgroup. Finally, differences in discrimination by race highlight the increased need to address discrimination among Black college students who self-identify as LGBTQ.

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**Table 1**  
Victimization, Discrimination, Connectedness, and Affirmation by Gender, Race, and Sexual Orientation

	n	%	Victimization Mean (SD)	Discrimination Mean (SD)	Connectedness Mean (SD)	LGBTQ Affirm Mean (SD)
Total Sample	868	100.0	2.22 (2.9)	5.28 (4.3)	2.68 (1.9)	10.83 (3.73)
Gender						
<sup>a</sup> Woman	552	63.6	b < a* 2.40 (3.2)	b < a:c*** 5.65 (4.4)	n.s. 2.64 (1.9)	a:c > b** 11.08 (3.5)
<sup>b</sup> Man	229	26.4	1.84 (2.3)	4.25 (4.0)	2.89 (1.9)	10.02 (4.2)
<sup>c</sup> Trans/Genderqueer	87	10.0	2.09 (2.2)	5.64 (4.1)	2.37 (1.8)	11.31 (3.6)
Race/Ethnicity						
<sup>a</sup> White	478	55.0	n.s. 2.26 (2.9)	b > a:c:d:e*** 4.70 (3.9)	n.s. 2.76 (1.9)	n.s. 10.87 (3.7)
<sup>b</sup> Black	65	7.5	2.29 (2.4)	8.20 (5.0)	2.32 (1.9)	11.14 (3.7)
<sup>c</sup> Asian	174	20.1	2.08 (3.1)	5.23 (4.2)	2.60 (1.9)	10.38 (3.8)
<sup>d</sup> Hispanic	120	13.8	2.12 (2.6)	5.80 (4.7)	2.64 (1.8)	11.01 (3.9)
<sup>e</sup> Other Race	31	3.6	2.61 (3.9)	6.29 (5.0)	2.77 (2.2)	11.28 (3.8)
Sexuality						
<sup>a</sup> Gay/Lesbian	245	28.3	b > a* 1.84 (2.6)	a < b:d*** 4.33 (4.1)	n.s. 2.90 (2.0)	c > a:b:d*** 10.87 (3.9)
<sup>b</sup> Bisexual	391	45.0	2.53 (3.2)	5.65 (4.4)	2.60 (1.8)	10.42 (3.9)
<sup>c</sup> Pansexual	138	15.9	2.09 (2.7)	5.37 (4.1)	2.75 (1.7)	12.09 (2.9)
<sup>d</sup> Queer/Unlabeled	94	10.8	2.14 (2.8)	6.05 (4.3)	2.33 (1.9)	10.45 (3.5)

Note:

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .

Tukey post-hoc significance tests were used to indicate between-group differences in ANOVAs.

Trans/Queer = Transgender or Genderqueer; n.s. = non-significant.

**Table 2**

Suicide Risk Characteristics by Gender, Race, and Sexual Orientation

	Depression Mean (SD)	Alcohol Mean (SD)	Past Year SI (%Yes)	Lifetime SA (%Yes)	Past Year NSSI (% Yes)
Total Sample	10.81 (6.1)	4.16 (4.5)	45.0	23.0	28.9
Gender	b < a;c ***	a;c < b ***	*	n.s.	***
<sup>a</sup> Woman	11.66 (6.2)	3.78 (4.2)	48.2 (+)	24.3	33.7 (+)
<sup>b</sup> Man	8.78 (5.6)	5.57 (5.0)	37.6 (-)	17.9	12.2 (-)
<sup>c</sup> Trans/Queer	10.79 (5.5)	2.91 (3.8)	44.8	28.7	42.5 (+)
Race/Ethnicity	n.s.	a > b;c ***	n.s.	***	n.s.
<sup>a</sup> White	10.71 (6.0)	4.82 (4.6)	45.2	19.0 (-)	30.3
<sup>b</sup> Black	10.98 (6.5)	3.14 (3.5)	56.9	36.9 (+)	23.1
<sup>c</sup> Asian	10.60 (5.9)	2.99 (4.2)	44.8	21.8	26.4
<sup>d</sup> Hispanic	11.14 (6.3)	3.83 (4.5)	38.3	34.2 (+)	25.0
<sup>e</sup> Other Race	11.90 (7.0)	4.13 (5.1)	45.2	19.4	48.4
Sexuality	a < b;c ***	c < a;b ***	**	n.s.	***
<sup>a</sup> Gay/Lesbian	9.43 (5.5)	4.93 (4.9)	36.3 (-)	18.0	18.4 (-)
<sup>b</sup> Bisexual	11.41 (6.4)	4.27 (4.4)	46.5	26.6	31.5
<sup>c</sup> Pansexual	11.60 (5.8)	3.00 (3.5)	51.4	24.6	38.4 (+)
<sup>d</sup> Queer/Unlabeled	10.73 (5.8)	3.43 (4.5)	52.1	19.1	31.9

Note:

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .

Tukey post-hoc significance tests were used to indicate between-group differences in ANOVAs. (+) and (-) signal direction of significant post-hoc chi-square cells.

Trans/Queer = Transgender or Genderqueer.

**Table 3**

Correlation Coefficients for Interpersonal and Suicide Risk Factors

	Discrimination	Victimization	Connected	LGBTQ	Depression	Alcohol	Ideation	Attempt
1. Discrimination	---	---	---	---	---	---	---	---
2. Victimization	.342***	---	---	---	---	---	---	---
3. Connectedness	-.179***	-.048	---	---	---	---	---	---
4. LGBTQ Affirm	-.005	.011	.148***	---	---	---	---	---
5. Depression	.207***	.156***	-.477***	-.068	---	---	---	---
6. Alcohol Use	.041	.112***	.122***	-.043	-.097**	---	---	---
7. Suicidal Ideation	.052	.118**	-.216***	.016	.266***	-.075*	---	---
8. Suicide Attempt	.114**	.158***	-.099**	.059	.094**	-.002	.104**	---
9. NSSI	.089*	.152***	-.187***	.047	.305***	-.082*	.281***	.200***

Note.

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$ .



**Table 4**  
Effects of Discrimination, Victimization, Connectedness, and LGBTQ Affirmation on Depression and Alcohol

	Depression			Alcohol		
	B	SE	$\beta$	B	SE	$\beta$
Step 1 <sup>a, c</sup>						
Discrimination	.172	.047	.123***	.030	.039	.029
Victimization	.142	.066	.069*	.215	.056	.141***
Connectedness	-1.370	.101	-.420***	.243	.085	.100**
LGBTQ Affirm	-.030	.049	-.018	-.064	.041	-.053
Step 2 <sup>b</sup>						
Victim*LGBTQ	-.032	.015	-.064*	---	---	---

Note.

\*  $p < .05$

\*\*

$p < .01$

\*\*\*  $p < .001$ .

All models controlled for age, gender, race, study-site, and sexual orientation. Backward stepwise procedures were used to remove non-significant interactions from models.

<sup>a</sup>Depression model:  $F(9,808) = 37.03, R^2 = .284, p < .001$

<sup>b</sup>Depression model:  $F(1,807) = 4.72, R^2 = .004, p = .030$

<sup>c</sup>Alcohol model:  $F(9,808) = 9.92, R^2 = .089, p < .001$

**Table 5**  
Effects of Discrimination, Victimization, Connectedness, and LGBTQ Affirmation on Suicidal Ideation, Attempts, and NSSI

	Suicidal Ideation		Suicide Attempt		Non-Suicidal Self-Injury	
	Wald $\chi^2$ (1)	OR (95% CI)	Wald $\chi^2$ (1)	OR (95% CI)	Wald $\chi^2$ (1)	OR (95% CI)
Step 1 <sup>a, b, d</sup>						
Discrimination	0.00	1.00 (0.96, 1.04)	0.31	1.01 (0.97, 1.06)	1.15	1.02 (0.98, 1.07)
Victimization	3.29	1.04 (0.99, 1.11)	11.99**	1.11 (1.05, 1.18)	5.04*	1.07 (1.01, 1.13)
Connectedness	23.32***	0.81 (0.75, 0.89)	7.45**	0.87 (0.79, 0.96)	14.58***	0.83 (0.76, 0.91)
LGBTQ Affirm	0.52	1.02 (0.98, 1.06)	3.68	1.05 (1.00, 1.10)	0.67	1.02 (0.97, 1.07)
Step 2 <sup>c</sup>						
Victim*Connect	---	---	4.62*	1.03 (1.00, 1.06)	---	---

Note.

\*  $p < .05$

\*\*

$p < .01$

\*\*\*

$p < .001$ .

All models controlled for age, gender, race, study-site, and sexual orientation. None of the interaction terms tested were statistically significant, and were removed from the final models

<sup>a</sup>SI model:  $\chi^2$  (15)=69.54, Nagelkerke  $R^2 = .109, p < .001$

<sup>b</sup>SA model:  $\chi^2$  (15)=89.62, Nagelkerke  $R^2 = .156, p < .001$

<sup>c</sup>SA model:  $\chi^2$  (1)=4.77,  $R^2 = .029$

<sup>d</sup>NSSI model:  $\chi^2$  (15)=117.83, Nagelkerke  $R^2 = .192, p < .001$ .